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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,621	03/24/2004	Anand Ganesh Dabak	TI-28940.1	6084
23494 7590 05/15/2008 TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265				
EXAMINER				
GHULAMALL QUTBUDDIN				
ART UNIT		PAPER NUMBER		
2611				
NOTIFICATION DATE		DELIVERY MODE		
05/15/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@ti.com

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### Office Action Summary

**Application No.**

10/808,621

**Applicant(s)**

DABAK ET AL.

**Examiner**

Qutbuddin Ghulamali

**Art Unit**

2611

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-12 and 25-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25 and 27-31 is/are rejected.
- 7) ☒ Claim(s) 10-12, 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This office action is in response to applicant's arguments/remarks filed 12/21/2007.

#### ***Claim Objections***

2. Claims 10-12 are objected to because of the following informalities: Claim 10, last line recites "greater". However, as per applicant's disclosure, see page 10, last two lines, state the output to be less and not greater. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 25, 27-31 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Whinnett et al (USP 6,317,411) in view of Okanoue (USP 5,202,903).

Regarding claim 25, Whinnett discloses a circuit comprising:  
an estimate circuit (figs. 2, 4, 5, 7 element 66, 50), coupled to receive an input signal from at least one of a plurality of transmit antennas (elements 34, 36, 38), the estimate circuit selectively producing a first estimate signal (r1) and a second estimate signal (r2) (col. 3, lines 18-32, 45-26);

a correction circuit coupled to receive the input signal, the first estimate signal and the second estimate signal, the correction circuit producing a corrected input signal (elements 70, 72) (col. 3, lines 55-67);

a combiner circuit (74) coupled to receive the corrected input signal, the combiner circuit producing a combined input signal (page 3, lines 60-65; page 6, lines 27-28; page 7, lines 1-9); and

a decoder circuit (134) coupled to receive the combined input signal, the decoder circuit arranged to decode the combined input signal, thereby producing the control signal (page 7, lines 23-30). Whinnett, however does not explicitly disclose estimate circuit coupled to receive a control or feedback signal from output (decoder). However, Okanoue, discloses the output of a viterbi decoder (25) is supplied an adaptive channel estimators  $21_1$ - $21_n$  as a feedback signal (col. 5, lines 10-21, 24-36). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use a feedback from decoder to channel estimator as taught by Okanoue in the circuit of Whinnett because it can maximize on metric estimation to detect a most likely symbol sequence to properly represent channel data.

As per claim 27, 28, 30 Whinnett discloses at least one pilot symbol of a wideband code division multiple access signal (col. 3, lines 10-14, 49-55).

Regarding claim 29, the steps claimed as method is nothing more than restating the function of the specific components of the apparatus as claimed above and therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to represent the claim in an alternate way so as to realize steps

of the apparatus as claimed, considering the aforementioned rejection for the apparatus claim 25.

As per claim 31, Whinnett discloses input signal represents a data signal of a primary common control physical channel (col. 2, lines 32-35, 45-50).

### ***Allowable Subject Matter***

5. Claims 10-12 would be allowable if rewritten or amended to overcome the claim objection, set forth in this Office action.
6. Claim 26 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutbuddin Ghulamali whose telephone number is (571)-272-3014. The examiner can normally be reached on Monday-Friday, 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2611

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

QG.  
May 12, 2008.

/CHIEH M FAN/  
Supervisory Patent Examiner, Art Unit 2611